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FORM PTO-1390 (REV 10-94)		U.S. Dept. of Commerce and Patent and Trademark Office	ATTORNEY'S DOCKET NUMBER: H01.2-8601
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371			U.S. APPLICATION NO. (if known): 09/403131
INTERNATIONAL APPLICATION NO.: PCT/EP98/02097	INTERNATIONAL FILING DATE (dd/mm/yy): 09 April 1998	PRIORITY DATE CLAIMED (dd/mm/yy): 16 April 1997	
TITLE OF INVENTION: A METHOD OF PACKING CONTAINERS IN TRANSPORT BOXES			
APPLICANT(S) FOR DO/EO/US: ECP-EUROPA CARTON FALTSCHACHTEL GMBH ET AL JENS ECKERMANN			
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:			
1.	<input checked="" type="checkbox"/>	This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.	
2.	<input type="checkbox"/>	This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.	
3.	<input checked="" type="checkbox"/>	This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).	
4.	<input checked="" type="checkbox"/>	A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.	
5.	<input checked="" type="checkbox"/>	A copy of the International Application as filed (35 U.S.C. 371(c)(2))	
	a.	<input type="checkbox"/> is transmitted herewith (required only if not transmitted by the International bureau).	
	b.	<input checked="" type="checkbox"/> has been transmitted by the International Bureau.	
	c.	<input type="checkbox"/> is not required, as the application was filed in the United States receiving Office (RO/US).	
6.	<input checked="" type="checkbox"/>	A translation of the International Application into English (35 U.S.C. 371 (c)(2)).	
7.	<input checked="" type="checkbox"/>	Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))	
	a.	<input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau).	
	b.	<input type="checkbox"/> have been transmitted by the International Bureau.	
	c.	<input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.	
	d.	<input type="checkbox"/> have not been made and will not be made.	
8.	<input checked="" type="checkbox"/>	A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).	
9.	<input type="checkbox"/>	An oath or declaration of the inventor (35 U.S.C. 371(c)(4)).	
10.	<input type="checkbox"/>	A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).	
Items 11. to 16. below concern other document(s) or information included:			
11.	<input type="checkbox"/>	An Information Disclosure Statement under 37 CFR 1.97 and 1.98.	
12.	<input type="checkbox"/>	An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.29 and 3.31 is included.	
13.	<input checked="" type="checkbox"/>	A FIRST preliminary amendment. Please enter the amendment before fee calculation.	
	<input type="checkbox"/>	A SECOND or SUBSEQUENT preliminary amendment.	
14.	<input type="checkbox"/>	A substitute specification.	
15.	<input type="checkbox"/>	A change of power of attorney and/or address letter.	
16.	<input type="checkbox"/>	Other items or information:	

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17. <input checked="" type="checkbox"/> The following fees are submitted:				CALCULATIONS	PTO USE ONLY
BASIC NATIONAL FEE (37 CFR 1.492(A)(1)-(5)): <i>(select the appropriate one of the following fees)</i> Search Report has been prepared by the EPO or JPO \$ 930.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) \$ 490.00 No international preliminary examination fee paid to USPTO (37 CFR 1.482) but international search fee paid to USPTO (37 CFR 1.445(a)(2)) \$ 750.00 Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$ 1,070.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Articles 33(2)-33(4) \$ 98.00 ENTER APPROPRIATE BASIC FEE AMOUNT =				\$ 930.00	
Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total Claims	19 - 20 =	-	x \$ 22.00	\$	
Independent Claims	2 - 3 =	-	x \$ 82.00	\$	
Multiple Dependent Claims (if applicable)			+ \$ 270.00	\$	
TOTAL OF ABOVE CALCULATIONS =				\$930.00	
Reduction by 1/2 for filing by small entity, if applicable. Verified Small Entity Statement must be filed also. (Note 37 CFR 1.9, 1.27, 1.28).				\$	
SUBTOTAL =				\$	
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				\$	
TOTAL NATIONAL FEE =				\$930.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property				\$	
TOTAL FEES ENCLOSED =				\$	
				Amount to be: Refunded	\$
				Charged	\$
a. <input checked="" type="checkbox"/> A check in the amount of \$930.00 to cover the above fees is enclosed. b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of \$_____ to cover the above fees is enclosed. A duplicate copy of this sheet is enclosed. c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 22-0350.					
Send All Correspondence To: Vidas, Arrett & Steinkraus, P.A. Suite 2000 6109 Blue Circle Drive Minnetonka, MN 55343-9131 Telephone: (612) 563-3000 Facsimile: (612) 563-3001				By:  RICHARD A. ARRETT, ESQ. Registration No. 33,153	

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:	FCP Europa Careton Faltschachtel GmbH et al
U.S. Nat'l Stage of Inter'l Appln No.	PCT/EP98/02097
Inter'l Filing Date:	09 April 1998
For:	A METHOD FOR PACKING CONTAINERS IN TRANSPORT BOXES

Box PCT
ATTN: EO/US
Assistant Commissioner for Patents
Washington, DC 20231

Docket No: H01.2-8601

PRELIMINARY AMENDMENT

Dear Sir:

Before calculating the filing fee please enter the following amendments.

In The Claims:

- Claim 6, line 1, delete "or 5";
- Claim 7, line 1, delete "one of the claims 1 to 6" and insert -- claim 1 --;
- Claim 8, line 1, delete "one of the claims 1 to 6 or 7" and insert - claim 1 --;
- Claim 9, line 1, delete "one of the claims 1 to 3 or 7, 8" and insert -- claim 1 --;
- Claim 10, line 1, delete "one of the claims 1 to 3 or 7 to 10" and insert -- claim 1 --;
- Claim 11, delete "one of the claims 1 to 3 or 7 to 10" and insert -- claim 1 --;
- Claim 13, delete "one of the claims 1 to 12" and insert -- claim 1 --;
- Claim 14, delete "one of the claims 1 to 13" and insert -- claim 1 --;
- Claim 15, delete "one of the claims 1 to 3 or 7 to 14" and insert -- claim 1 --;
- Claim 16, delete "one of claims 1 to 15" and insert -- claim 1 --;
- Claim 18, delete "one of the claims 1 to 17" and insert -- claim 1 --;
- Claim 19, delete "one of the claims 1 to 18" and insert -- claim 1 --;

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Preliminary Amendment

REMARKS

The claim amendments are being made to remove the multiply dependent claim.

Respectfully submitted,

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A Method for Packing Containers In Transport Boxes

The invention relates to a method for packing containers, in particular bottles, in transport boxes.

For years typical export packagings for beer and other drinks in bottles, in particular for export to North America are known in two traditional versions. For the drinks operation at the retailers the packaging is composed of a transport box and four six-multipiece packagings in the style of the open basket carrier" (i.e. packagings in the form of a carrier basket open at the top - cf. EP 0 280 095 B1). Drinks bottles for the restaurant business for transport are brought in a conversion box with a separate compartment unit of cardboard or corrugated cardboard.

The transport box for six-multipiece packagings is as a rule manufactured of corrugated cardboard, in exceptional cases also from solid cardboard with a gram weight of more than 800 g/m². This transport box is pre-adhesed, in the flat condition delivered to the drinks industry and here in the filling region is set up by machine and adhesed in the base region.

Parallel to this pre-adhesed flat-lying "open basket carriers" such as the type "Euroset-Truckloader" (cf. EP 0 280 095 B1) are folded open and interlocked. The set-up "open basket-carriers" interlocked at the base are then in a group of four applied into the already set-up and adhesed transport box. In the further course of the packaging procedure in each case 24 filled bottles with a bottle or placing packer are applied from above into the pre-prepared packaging unit. Subsequently to this filling procedure the transport boxes are closed and palletted ready for transport.

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Bottles which are exported for the requirements of the restaurant business for transport come into a enveloping box with compartment units. These transport boxes as described above are set up, adhered in the base region and in a subsequent procedure in a separate machine installation are equipped with compartment units which with a so-called compartment unit inserter are folded up from a flat condition and from above are incorporated into the transport box. The filling of the resulting packing unit with 24 filled bottles is then in turn effected as described above, and the obtained total unit is then in a similar manner made ready for transport.

Furthermore there are known packing methods which have the following course:

Open basket carriers are folded up, adhered on the base and four of these six-packs in the set up and empty condition are brought together to a formation. Into this foursome formation the bottles are lowered. The filled foursome formation is then laterally inserted in an enveloping box which is set up parallel to this procedure and which then for transport is closed. The transport box may also be a so-called wrap-around solution which is wound around the formation.

For the transport of loose bottles, 24 bottles are grouped, a web insert is folded out and then drawn over the bottles. In a vibration path the web is shaken between the bodies of the bottles, then the twenty-four unit is laterally inserted into the transport box or wrapped around by a transport box blank.

Proceeding from this it is the object of the invention to simplify the packing procedure in the filling operation of the drinks manufacturer or packers of containers.

This object is achieved by a method for packing containers, in particular bottles, in transport boxes in which

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- on the inside, on flat-lying transport boxes, flat-lying multi-piece packagings are releasably fastened or compartment units are fastened,
- the transport boxes and the multi-piece packagings contained therein or compartment units are set up,
- containers are applied through openings of the set-up transport boxes into receivers of the multi-piece packages or compartment units, and
- the openings of the transport boxes are closed.

According to the invention the transport boxes may already be equipped with multi-piece packagings or compartment units at the packing manufacturer. At the packer then in one working procedure the transport boxes and the multi-piece packagings contained therein may be set up. The separate setting up of the multi-piece packagings or compartment units and their insertion into the transport boxes is done away with.

Preferably the walls of the transport boxes on setting up exert forces onto inner-lying walls of the multi-piece packagings or onto end regions of the compartment units, by which means the multi-piece packagings or compartment units are set up. For setting up the complete packing units then from the outside one only needs to manipulate the transport boxes.

The fastenings serve the retention of the transport boxes and multi-piece packagings or compartment units at least up to the setting up and on setting up may support the force transmission. They are effected preferably by adhering.

For a simplified removal, multi-piece packagings may be releasably fastened in a position which with respect to their final position in the closed transport boxes, by insertion of the containers the fastenings released and the multi-piece packagings moved into their final position in the transport boxes. On removal of the multi-piece packagings from the transport boxes the fastenings then no longer need be released. If

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Fig. 2a to c	the same transport box after setting up (Fig. 2 a), on inserting bottles (Fig. 2 b), in each case in a longitudinal section;
Fig. 3	a flatly widened-out blank of the previously mentioned multi-piece packaging in a plan view;
Fig. 4	the multi-piece packaging set up from the blank according to Fig. 3, in a lateral perspective view;
Fig. 5	a part of the multi-piece packaging according to Fig. 4 in a perspective view from below;
Fig. 6a to c	a flatly broadened out blank of another transport box with flat-lying multi-piece packagings before the fastening (Fig. 6 a) and after the fastening (Fig. 6 b) and the transport box which subsequently is closed to a flat-lying envelope (Fig. 6 c) in each case in a perspective view obliquely from above;
Fig. 7	the same transport box after setting up, in a longitudinal section;
Figs. 8a to c	a flatly broadened out blank of a transport box and a flat-lying compartment unit before the fastening (Fig. 8 a) and after the fastening (Fig. 8 b) and the transport box which subsequently is closed to a flat-lying envelope (Fig. 8 c) in each case in a perspective view obliquely from above;
Fig. 9	the same transport box after setting up, in a heavily enlarged, perspective lateral view.

This blank 1' may already be adhered at the packing manufacturer. For this firstly the longitudinal web sections 24, 25 may be folded with the appended end-face side walls 16, 18 against the longitudinal side walls 10, 11, wherein the grip sections 26, 27 come to bear on the inner sides of the grip sections 48, 49 and are adhered to these. At the same time the transverse webs 33 to 36 with their tab ends come to bear on the

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longitudinal side walls 10, 11 and here are adhered to these. Subsequently the connecting tabs 20, 21 may be folded against the inner sides of the end-face side walls 15, 17 and the grip sections 48, 49 and on the connection section 22 adhered to the grip sections. Thereafter the parts of the blank about the fold lines in the connection section 22 and between the grip sections 26, 27, 48, 49 are folded against one another wherein an adhering between the connecting tabs 20, 21 and the longitudinal web sections 24, 25 is effected. Then still the base wall 12 may be folded about the score line 13 and adhered to the base connecting tab 19. The multi-piece packaging 1' is located in the flat-lying condition, in which it is shown in Fig. 1.

The flat-lying multi-piece packaging 1' may be set up according to Fig. 4 and 5 in that one presses against the end-face walls 15, 17 and the longitudinal side walls are firmly held. With this the base wall 12 is automatically folded apart.

Further details of the multi-piece packaging 1' may be deduced from EP 0 280 095 B1. The multi-piece packaging described here has a base interlocking which above all serves the stabilizing in the unfilled condition and which with the multi-piece packaging 1' according to the invention has been left out since this directly after setting up can be filled with bottles and then is sufficiently stable. Beyond the embodiments according to EP 0 280 095 B1 that shown here has either on the longitudinal side wall 10 upwardly projecting, semi-circular cardboard tabs 50, 51 (first variant 1') or on the longitudinal side wall 11 corresponding cardboard tabs 52, 53 (second variant) which are indicated by dashed lines. The cardboard tabs 50, 51 or 52, 53 are separably connected to the longitudinal side walls 10, 11 via perforation lines 54, 55 or 56, 57. With a third variant 1'' the cardboard tabs 50, 51 or 52, 53 are absent and in the base wall 12 two wall sections 58, 59 which can be torn out are limited by perforation lines which are indicated by dashed lines. The wall sections 58, 59 which can be torn out are in the manner of centre sleeve punch-outs lozenge-shaped and are arranged on the score line 13.

According to Fig. 1 two "open basket carriers" 1' and two further ones 1" are adhered in the adhered, flat-lying condition into each transport box 60. This has longitudinal and end-face side walls 61 to 64 hinged to one another. The longitudinal side wall 61 on the end-face side has a connecting tab 65. Furthermore the longitudinal side walls 61 and 63 on the one longitudinal side has base flaps 66, 67 and on the oppositely lying side has lid flaps 72, 73. Furthermore they have middle fold lines 74, 75 which extend through the base flaps 70, 71 and through the lid flaps 72, 73.

According to Fig. 1a two pairs of multi-piece packagings 1', 1" are arranged such that each pair is aligned outwardly. The two multi-piece packagings 1', 1" of each pair may thus be set up by way of pressing together the end-face side walls 15, 17. According to Fig. 1b the multi-piece packagings 1', 1" with the longitudinal side walls 10, 11 are arranged on the inner sides of the longitudinal side walls 61, 63 and with the cardboard tabs 50, 51 or 52, 53 on the inside on the lid flaps 68, 69 of the transport box 60, wherein the cardboard tabs are adhered to the lid flaps. In the arrangements according to Figs. 1 and 2 the multi-piece packagings 1', 1" have the cardboard tabs 50, 51 and 52, 53 exclusively on the lower lying longitudinal side walls 10, 11 so that the cardboard tabs are actually (partly) covered. For illustration however all cardboard tabs 50 to 53 are illustrated. The longitudinal side walls 10, 11 of the multi-piece packagings 1', 1" are just half as long as the lateral side walls 61, 63 of the transport box so that the end-face side walls 15 and 17 of the multi-piece packagings 1' 1" come to lie over bordering end-face side walls 62, 64 or the connecting tab 65 of the transport box 60.

According to Fig. 1c subsequently the transport box 60 by folding about the middle fold lines 74, 74 and adhering the lateral side wall 64 to the connecting tab 65 is closed into a flat-lying envelope. Thus the packaging in stacks is delivered from the packing manufacturer to the packer.

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The packer may set up the transport boxes by pressing together the middle fold lines 74, 75 until the end-face side walls 62, 64 are set up perpendicular to the longitudinal side walls 61, 63. With this the end-face side 62, 64 walls exert onto the inner bearing end-face side walls 15, 17 of the multi-piece packagings 1', 1" a pressure which by way of support of the multi-piece packagings 1', 1" on one another and their fastening on the longitudinal side walls 61, 63 is taken up and leads to a simultaneous right-angled folding open of the "open basket carrier" 1', 1". With this the base wall 12 of the multi-piece packagings 1', 1" closes automatically.

Thereafter the base flaps 70, 71 and 66, 67 of the transport box 60 is closed and adhered to one another. In this configuration the transport box 60 is shown in Fig. 2a. By way of the adhesive fastening of the cardboard tabs 50 to 53 on the lid flaps 68, 69 between the closed bases of the four "open basket carriers" 1', 1" and the transport box 60 there is formed a hollow space.

Thus the transport box 60 is led to a filling installation which according to Figs. 2b from above 24 filled drinks bottles 80 are inserted through the opening 81 of the transport box 60. By way of the weight of the drinks bottles 80 the cardboard flaps 50 to 53 are torn off along their perforation lines 54 to 57. Then the four filled "open basket carriers" 1', 1" are pressed downwards up to the base of the transport box 60. The rest of the cardboard tabs 50 to 53 remain on the lid flaps 68, 69. This condition of the transport box is shown in Fig. 2c.

For completion of the packing process the lid flaps 72, 73 and 68, 69 of the transport box are closed and adhered to one another. The finished transport box 60 corresponds in the manner and function largely to the known transport boxes with applied "open basket carriers". The deviating packing process is in particular recognizable on the box flaps 50 to 53. These may on opening the lid flaps 68, 69, 72, 73 be folded out of the

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opening 81 of the transport box 60 and do not prevent the removal of the multi-piece packagings 1', 1".

According to Fig. 6 with a second embodiment form of the transport box 60 in contrast to the one previously described has on the base flap 67 a connecting tab 76 on the base side. Furthermore with this embodiment form exclusively multi-piece packagings 1" with wall sections 58, 59 which can be torn out are applied.

According to Fig. 6a two pairs of multi-piece packagings 1''' are arranged such that the end-face side walls 15, 17 of the two multi-piece packagings 1''' of each pair are directed outwards. According to Fig. 6b the multi-piece packagings 1''' with the longitudinal side walls 10, 11 are placed on the inner sides of the longitudinal side walls 61, 63, wherein the lower edges of the longitudinal side walls 10, 11 are arranged on the lower edges of the longitudinal side walls 61, 63. The wall sections 58, 59 which may be torn out are arranged on the inner sides of the base flaps 66, 67 and are adhered to these on their lower-lying halves. Also with this embodiment the end-face side walls 15 and 17 of the multi-piece packagings 1''' come to lie over bordering end-face side walls 62, 64 and the connection tab 65 of the transport box 60 respectively.

According to Fig. 6c subsequently the transport box 60 by way of folding about the middle fold lines 74, 75 and adhering the end-face side wall 64 to the connecting tab 65 is closed to a flat-lying envelope. Furthermore the base flaps 66, 67 by way of folding over and adhering the further connecting tab are connected to one another to a part-automatic base. Thus this packing is delivered in stacks from the packing manufacturer to the drinks manufacturer.

The drinks manufacturer may also set up these transport boxes 60 by pressing together the middle fold lines 74, 75, wherein the part-automatic base is tensioned from the base flaps 66, 67. With this the contained multi-piece packagings 1''' are set up in particular

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by introducing force from the end-face walls 62, 64 and the base flaps 66, 67 of the transport box 60.

Subsequently the base flaps 70, 71 are laid around and adhesed to the base flaps 66, 67. In this configuration the transport box 60 is shown in Fig. 7. The multi-piece packagings 1" are already located in their final position on the base of the transport box 60.

In a filling installation then drinks bottles may be inserted through the opening 81 of the transport box 60 into the four contained multi-piece packagings 1" and subsequently the lid flaps 72, 73 and 68, 69 may be closed.

After the opening of the lid flaps 68, 69, 72, 73 the removal packagings 1" may be pulled out by way of a slight "jerk", wherein the wall sections 58, 59 tear out and remain in the transport box 60.

The third embodiment form has in place of the multi-piece packagings 1 a compartment unit 90 which firstly is explained by way of Fig. 9. It consists of three longitudinally-directed box strips 91 which at uniform distances comprise slots 62 which proceed from the lower edge of the strips and which extend roughly over half their height. Furthermore it has in an alternate arrangement transversely-directed cardboard strips 93, 94 which both at uniform distances have slots 95, 96 which extend from the upper edge of the strips and which likewise extend over roughly half their length. The longitudinally-directed cardboard strips 91 and the transversely-directed cardboard strips 93, 94 are inserted into one another in the known manner at their slots 92 and 95 and 96 respectively.

The transversely directed cardboard strips 94 have on both ends hinged fastening tabs 97.

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The compartment unit may be flatly collapsed with the middle, longitudinally-directed cardboard strip 91' by folding together the two sections 93', 93" and 94', 94" of the transversely-directed cardboard strips 93, 94 about the connection axis defined by the slots 92 and 95, and 96.

Fig. 8a shows the compartment unit 90 in a flatly collapsed position, in which the middle cardboard strip 91' forms the one end and the two lateral cardboard strips 91, 91' the other end. The two fastening tabs 97 of the transversely-directed cardboard tabs 94 are arranged on the two outer sides of the flat-lying compartment unit 90. Thus the compartment unit 60 is fastened on the flat-lying blank of a transport box 60 which in all details corresponds to that of Fig. 1.

According to Fig. 8b for this the compartment unit 90 is positioned over the transport box 60 so that it with the end formed by the middle cardboard strip 91' occludes flush with the middle fold line 74, and with the fastening tabs 97 comes to lie over the longitudinal side wall 63. The fastening tabs 97 are adhesed to the longitudinal side wall 63. Then the transport box by folding about the middle fold lines 74, 75 is closed into a envelope, wherein the longitudinal side wall 61 is adhesed to the fastening tabs 97 on the other side of the compartment unit 90 and the connecting tab 65 to the end-face side wall 64. In this arrangement the transport box is shown in Fig. 8c. Thus in stacks in may be delivered from the packing manufacturer to the filler.

The filler may then set up the transport box 60 by pressing together the middle fold lines 74, 75, wherein the longitudinal side walls 61, 63 fold apart the sections 94', 94" of the transversely-directed cardboard strip 94 and by way of this set up the compartment unit 90. The setting up procedure may be supported by pressing the end-face side walls 62, 64 against the longitudinally-directed cardboard strips 91.

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Thereafter the base is closed by folding down and adhering the base flaps 70, 71 and 66, 67 . In this configuration the transport box is shown in Fig. 9.

It may likewise be filled by applying 24 bottles from above through the opening 81. Thereafter it is closed by closing and adhering the lid flaps 72, 73 and 68, 69.

The bottles after opening the lid are individually withdrawn from the compartment unit 90.

English Translation of Amended Claims 1 to 19

1. A method for packing containers, in particular bottles, in transport boxes, in which
 - on the inside, on flat-lying transport boxes (60), flat-lying multi-piece packagings (1) are releasably fastened,
 - the transport boxes (60) and the multi-piece packagings (1) contained therein are set up,
 - containers (80) are inserted through openings (81) of the set-up transport boxes (60) into receivers of the multi-piece packages (1) and
 - the openings (81) of the transport boxes (60) are closed.
2. A method according to claim 1, in which the multi-piece packagings (1) on the inside are fastened onto flat, opened-out blanks (60) of the transport box, the transport boxes are closed into flat-lying envelopes (60), the envelopes (60) are set up and the containers (80) are inserted through openings (81) of the set-up envelopes (60).
3. A method according to claim 2, in which the transport boxes (60) comprising the lateral walls (61 to 64) hinged to one another are folded about middle fold lines (74, 75) of two end-face side walls (62, 64) into flat-lying envelopes (60).
4. A method for packing containers, in particular bottles, in transport boxes, in which
 - on the inside, on flat-lying transport boxes (60) flat-lying compartment units (90) which are formed by inserting several cardboard strips (91, 94) into one another at incisions (92, 95, 96) and which can be set up by pivoting about incisions are fastened,

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- the transport boxes (60) comprising the lateral walls (61 to 64) hinged to one another are folded about middle fold lines (74, 75) of two end-face side walls (62, 64) into flat-lying envelopes (60)
 - the transport boxes (60) and the compartment units (90) contained therein are set up by pivoting sections (94', 94'') of a group of parallel cardboard strips (94) about a middle cardboard strip (91') of a further group of parallel cardboard strips (91)
 - containers (80) are inserted through openings (81) of the set-up transport boxes into receivers of the multi-piece packages (1) and
 - the openings (81) of the transport boxes (60) are closed.
5. A method according to claim 4, in which the compartment units (90) on the inside are fastened on flatly widened-out blanks (60) of transport boxes, the transport boxes are closed into flat-lying envelopes (60), the envelopes (60) are set up and the containers (80) are inserted through openings (81) of the set up envelopes (60).
 6. A method according to claim 4 or 5, in which cardboard strips (94) of the compartment units (90) are connected to side walls (61, 63) of the transport boxes (60) by way of fastening tabs (97).
 7. A method according to one of the claims 1 to 6, in which the flat-lying transport boxes (60) with the multi-piece packagings (1) or compartment units (90) fastened thereto are stacked and individual transport boxes (60) with the multi-piece packagings (1) or compartment units (90) for setting up are withdrawn from the stack.
 8. A method according to one of the claims 1 to 6 or 7, in which the multi-piece packagings (1', 1'') are releasably fastened in a position which with respect to their

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final position in the closed transport boxes (60) is displaced towards the openings (81) thereof and by insertion of the containers (81) the fastenings (50 to 53) are released and the multi-piece packagings (1', 1'') moved into their final position.

9. A method according to one of the claims 1 to 3 or 7, 8, in which the multi-piece packagings (1', 1'') are releasably fastened on lid flaps (68, 69) for closing the openings (81) of the transport boxes (60).
10. A method according to one of the claims 1 to 3 or 7 to 10, in which the multi-piece packagings (1', 1'') by way of separable cardboard tabs (50 to 53) at their side walls (10, 11), preferably at the upper edges thereof, are fastened on the transport boxes (60).
11. A method according to one of the claims 1 to 3 or 7 to 10, in which the multi-piece packagings (1''') on wall sections (58, 59) which can be torn off and which are limited by perforation lines are releasably fastened on the transport boxes (60).
12. A method according to claim 11, in which the multi-piece packagings (1'''), on wall sections (58, 59) of their base walls (12), these wall sections able to be torn off, are releasably fastened on base flaps (66, 67) of the transport boxes (60), wherein the wall sections (58, 59) are preferably arranged on middle axes (13) of the base walls (12).
13. A method according to one of the claims 1 to 12, in which the multi-piece packagings (1) or compartment units (60) are fastened on the transport boxes (60) by adhering.
14. A method according to one of the claims 1 to 13, in which walls (61 to 64) of the transport boxes (60) on setting up exert forces on inner bearing walls (11, 15, 17) of

.../4

- 4 -

the multi-piece packagings (1) or end regions (97) of the compartment unit (90) by which means these are set up.

15. A method according to one of the claims 1 to 3 or 7 to 14, in which the multi-piece packagings (1) are set up by folding away their end-face side walls (15, 17) and where appropriate their transverse webs (33 to 36) from a longitudinal web (24, 25) and removing their longitudinal side walls (10, 11) from the longitudinal web (24, 25) whilst forming receivers open at the top.
16. A method according to one of claims 1 to 15, in which at least partly automatic bases (12) of the multi-piece packagings (1) and/or of the transport box (60) are closed on setting up these.
17. A method according to claim 16, in which on setting up the multi-piece packagings (1) and/or transport boxes (60) base walls (12) and/or base flaps (66, 67) which are hinged on oppositely lying side walls (10, 11) of the packagings and/or transport boxes and which are folded together are folded open.
18. A method according to one of the claims 1 to 17, in which after setting up the transport box (60) base flaps (70, 71, 66, 67) of these are closed.
19. A method according to one of the claims 1 to 18, in which after inserting the containers (81) into the transport boxes (60) lid flaps (72, 73, 68, 69) of these are closed.

Abstract

A Method for Packing Containers in Transport Boxes

A method for packing containers, in particular bottles, in transport boxes in which

- on the inside, on flat-lying transport boxes, flat-lying multi-piece packagings are releasably fastened or compartment units are fastened,
- the transport boxes and the multi-piece packagings or compartment units contained therein are set up,
- containers are applied through openings of the set-up transport boxes into receivers of the multi-piece packages or compartment units, and
- the openings of the transport boxes are closed.

FIG. 1a

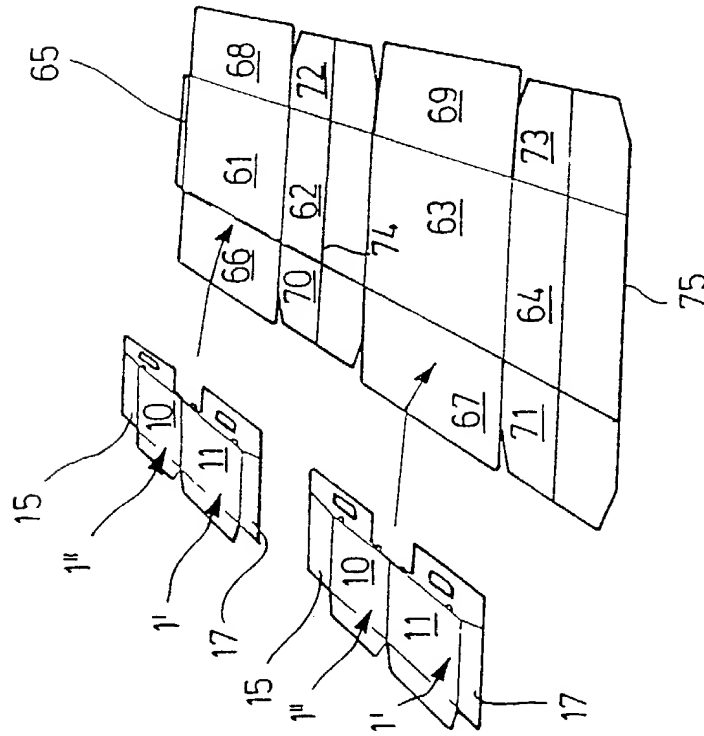


FIG. 1b

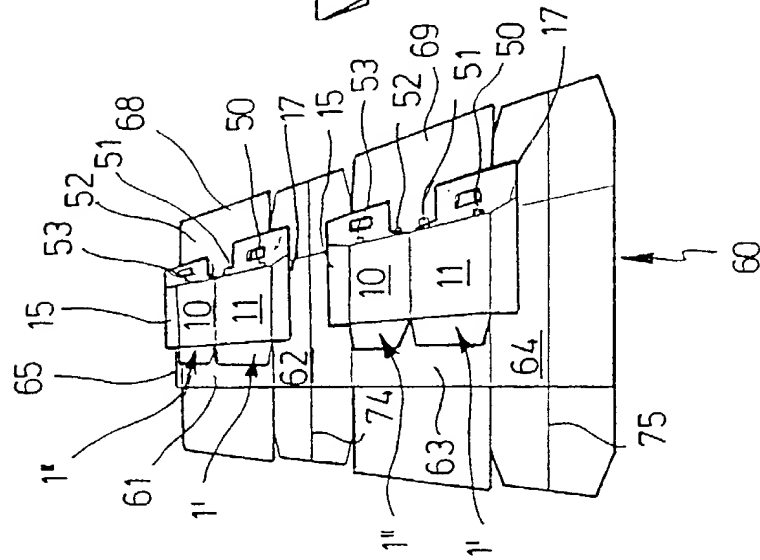
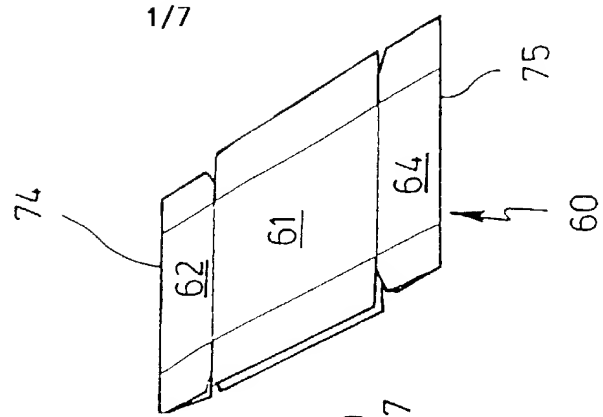


FIG. 1c



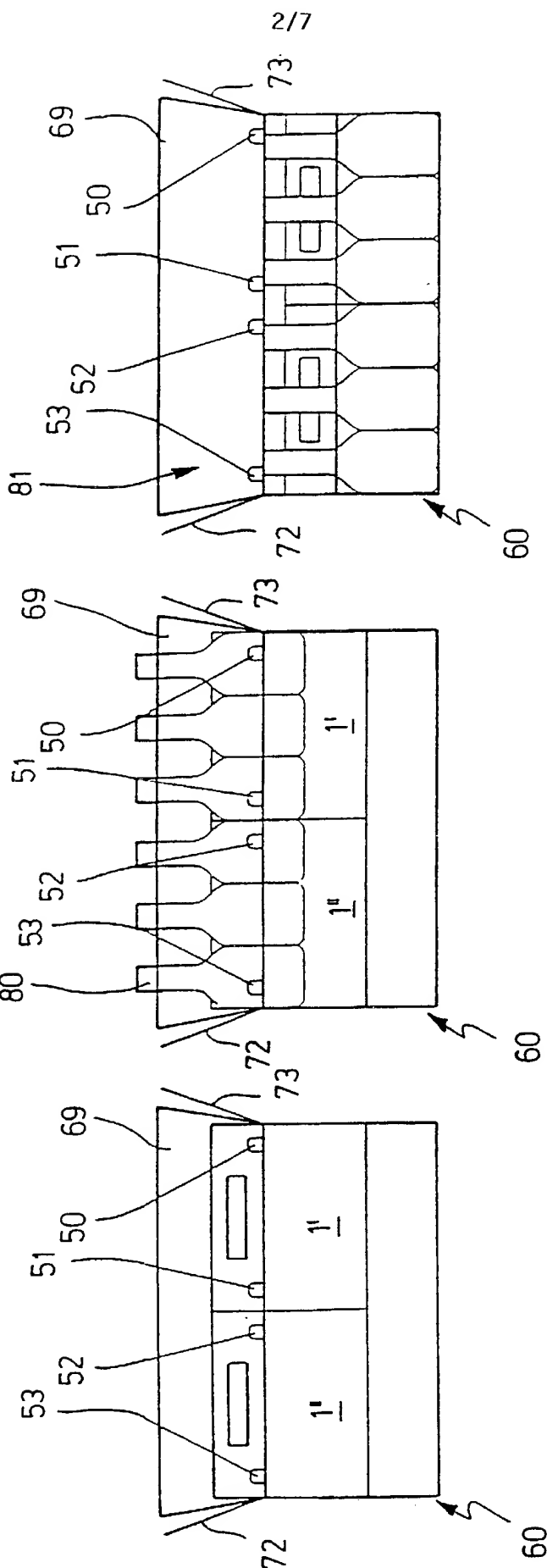


FIG. 2c

FIG. 2b

FIG. 2a

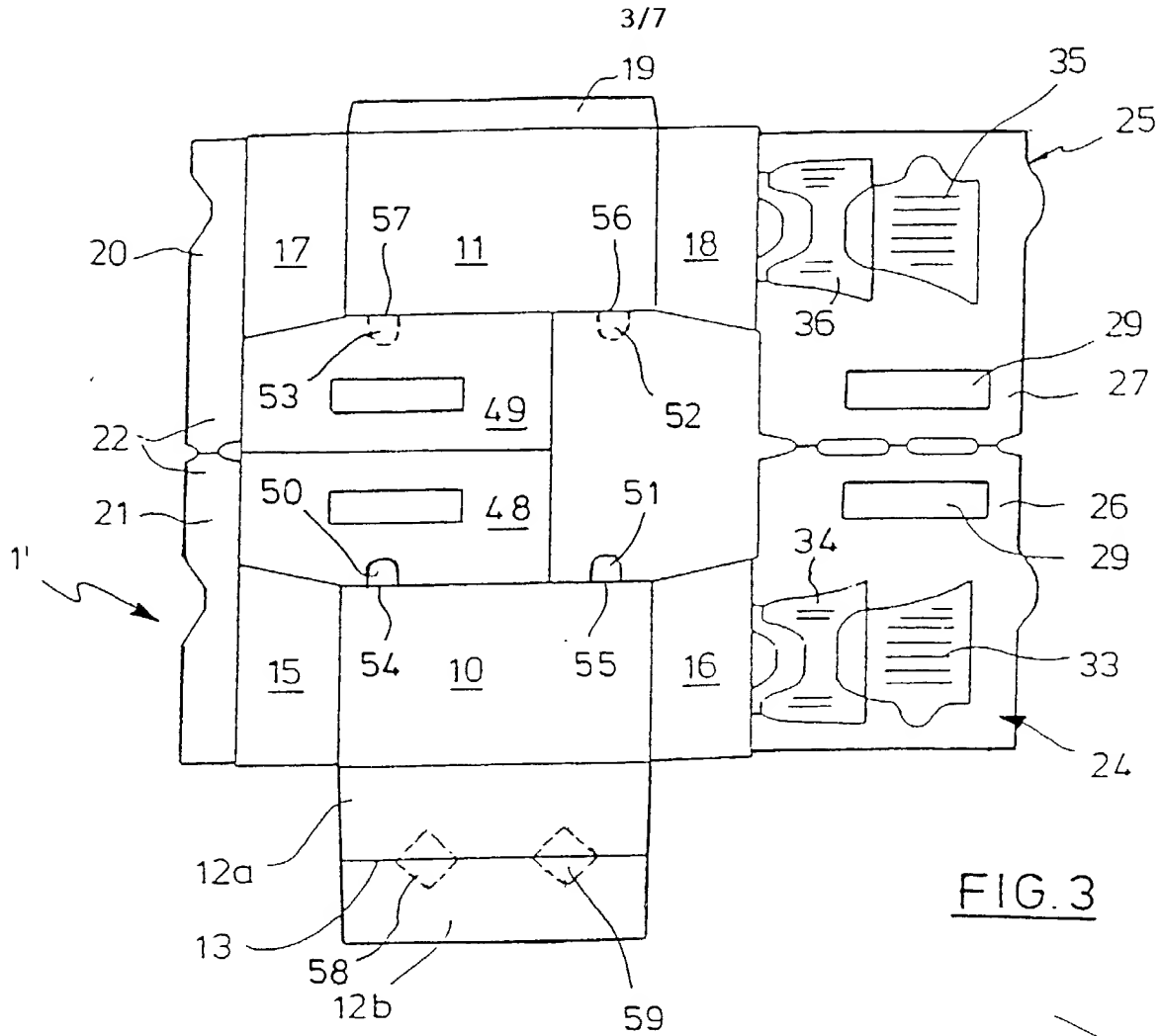


FIG. 3

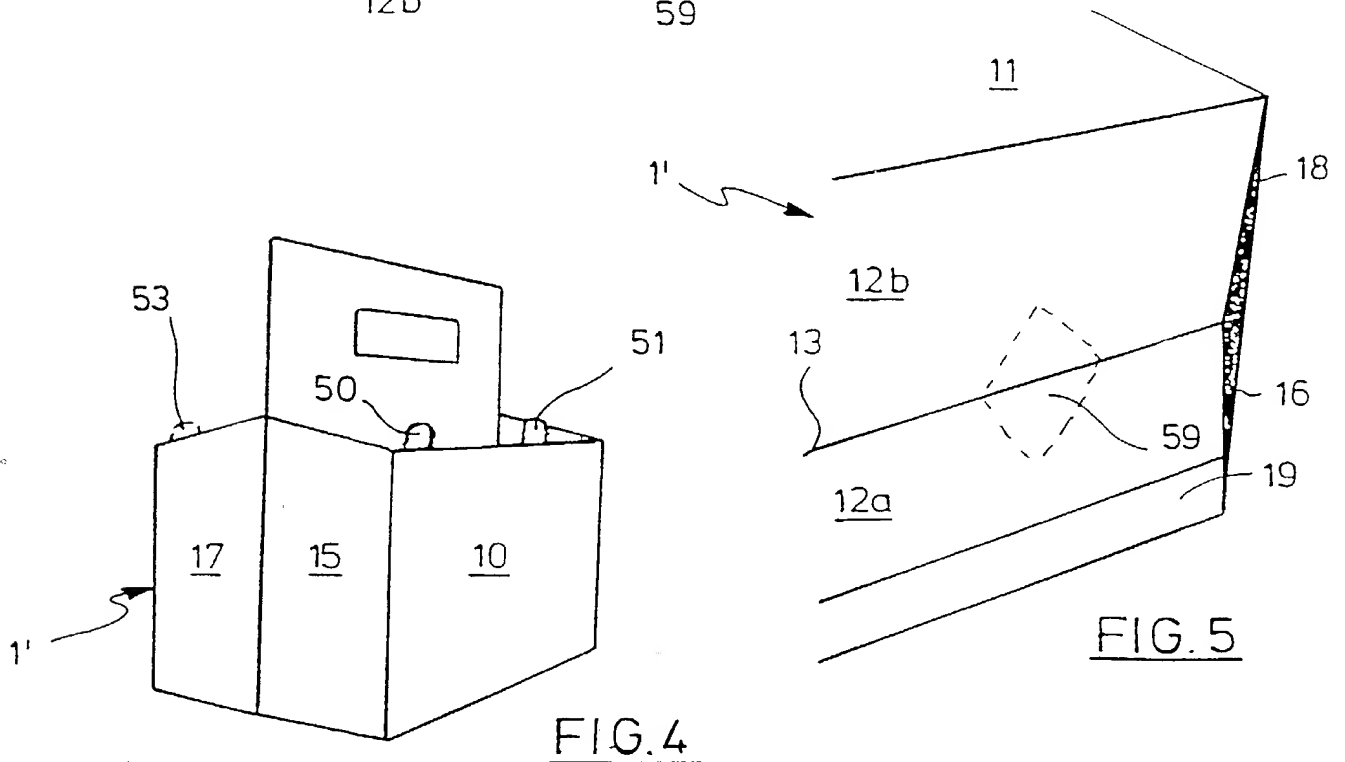


FIG. 4

FIG. 5

FIG. 6a

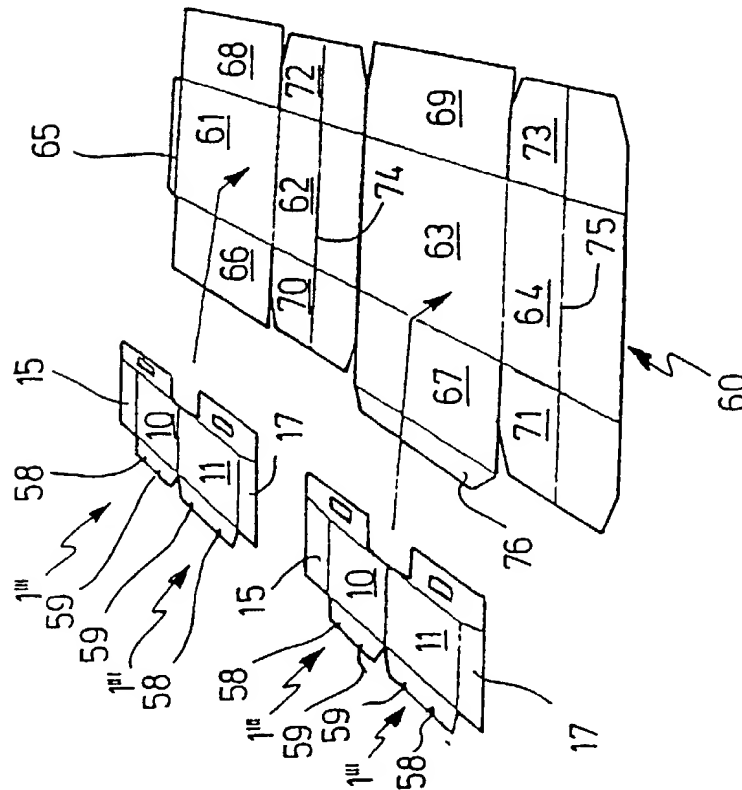


FIG. 6b

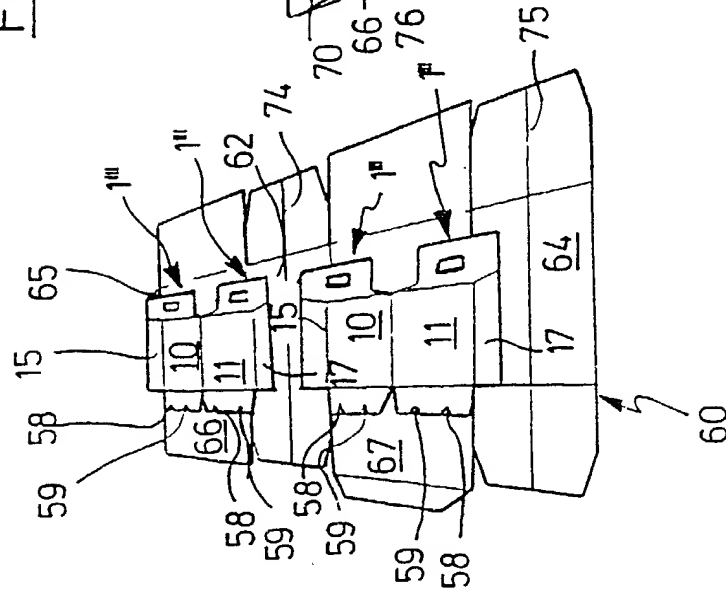


FIG. 6c

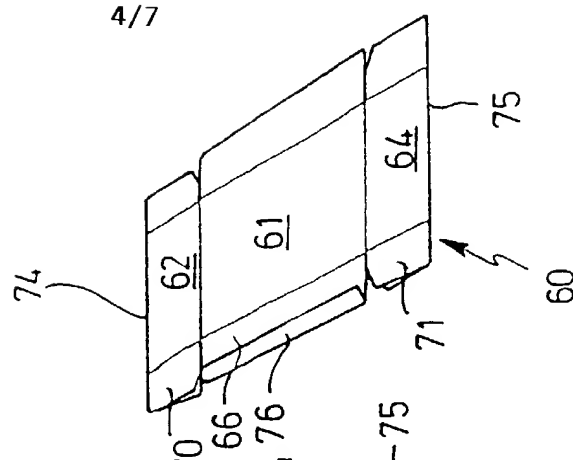


FIG. 7

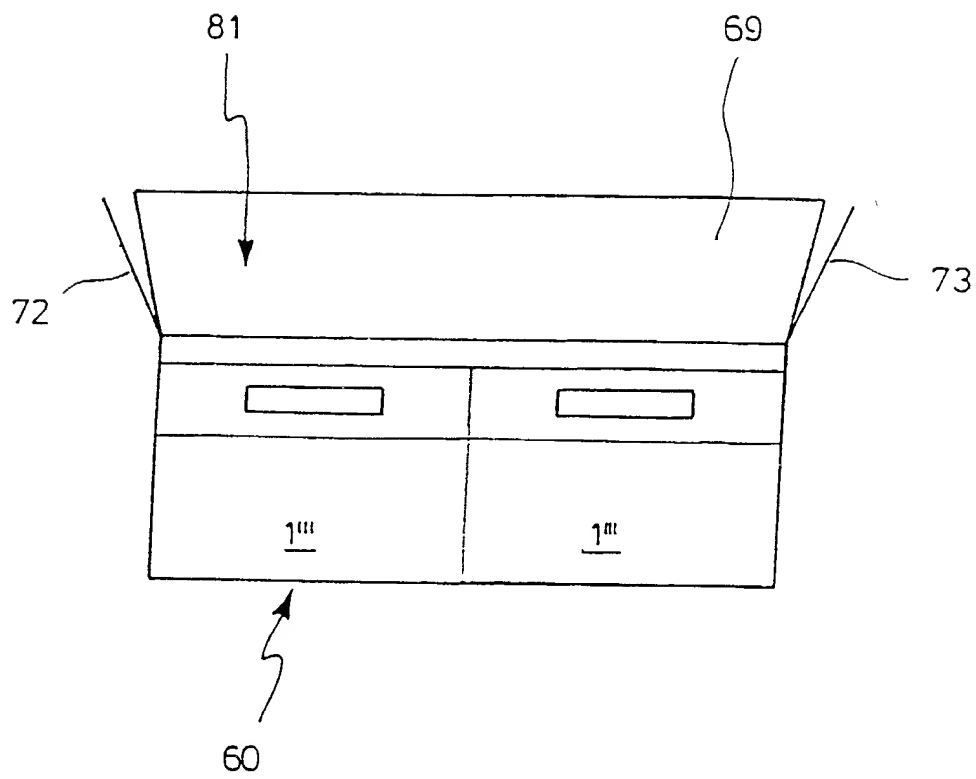


FIG.8a

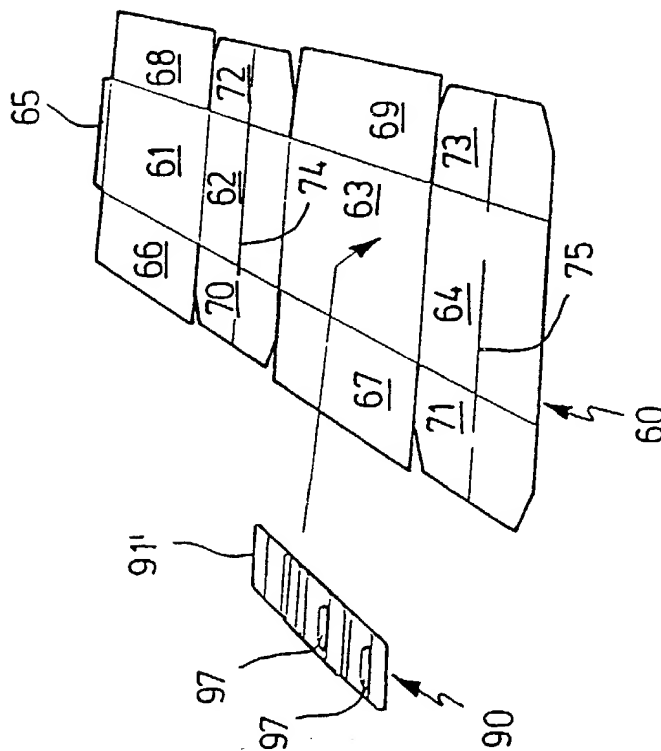


FIG.8b

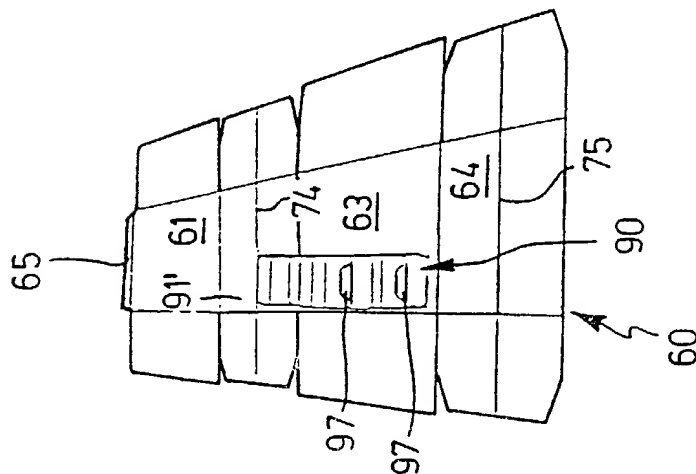


FIG.8c

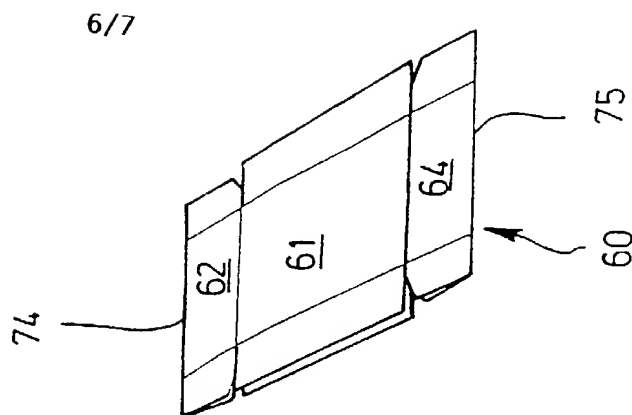
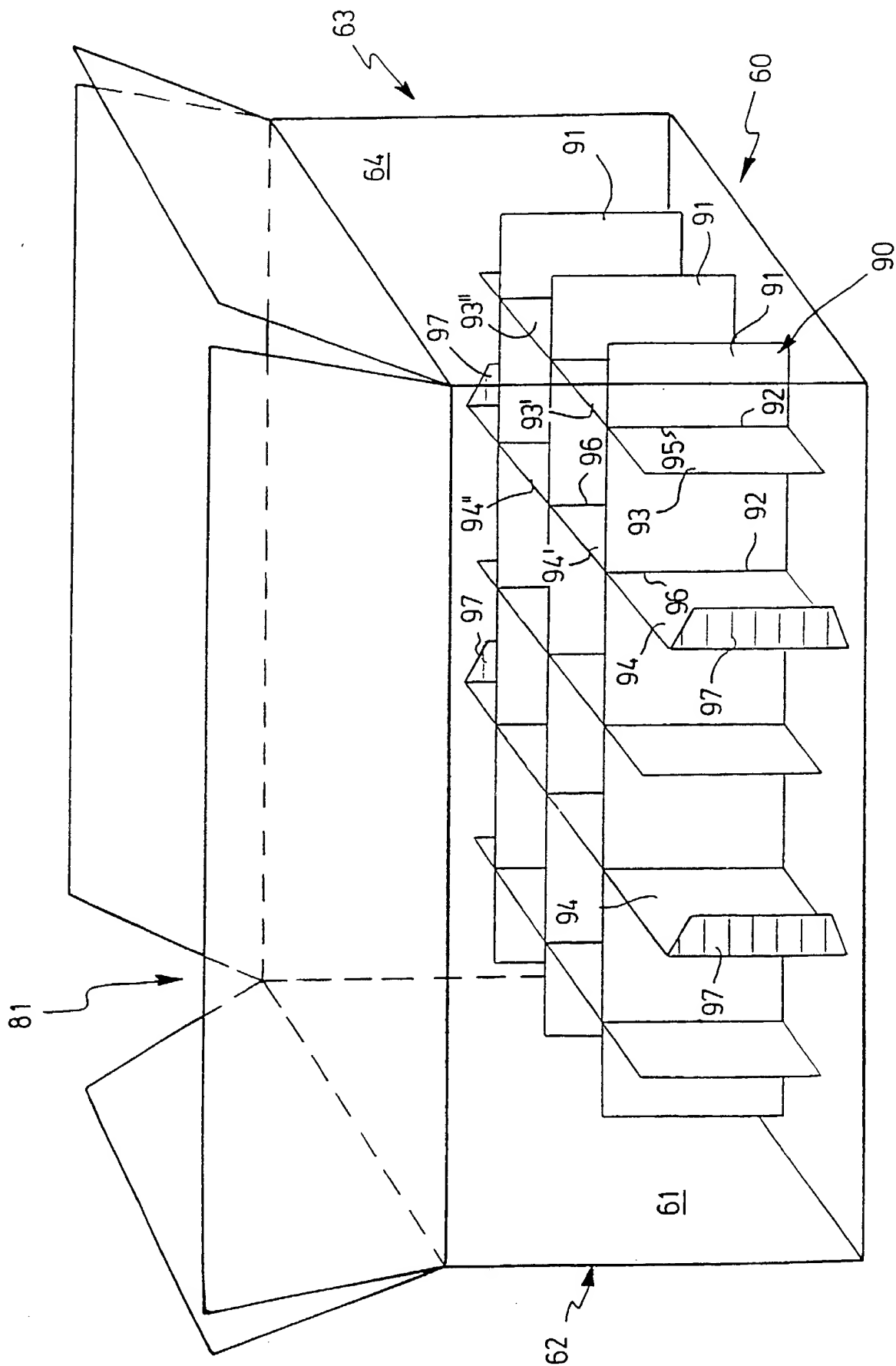
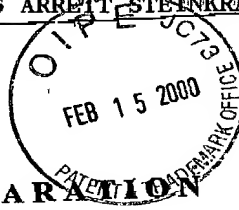
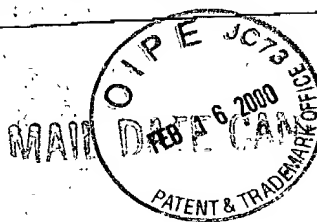


FIG. 9





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DECLARATION

PATENT/DESIGN PATENT

As a below-named inventor, we hereby declare that:
Our residences, post office address, and citizenship are as stated below next to our names;

We verily believe we are the original, first and sole inventors (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

A METHOD FOR PACKING CONTAINERS IN TRANSPORT BOXES
(Insert invention title)

the specification of which is attached hereto.

We hereby state that we have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to in the declaration.

We acknowledge the duty to disclose all information which is known to be material to patentability of this application in accordance with Title 37, Code of Federal Regulations §1.56.

We hereby claim foreign priority benefits under Title 35, United States Code, §119, of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

(List prior foreign applications)

COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	PRIORITY CLAIMED UNDER 37 USC 119
DM	PCT/EP98/02097 ✓	Sept. 4, 1998 ✓	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO

I hereby declare that all statements made herein of my knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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MAIL DATE CANCELLED

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PATENT/DESIGN PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor: Jens Eckermann et al

Title: A METHOD FOR PACKING
CONTAINERS IN TRANSPORT BOXES

Filed: ☐ Concurrently Herewith
☒ on Oct 14, 1999
Ser. No. 09/403 131

MAIL DATE CANCELLED
FEB 15 2000
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FROM ASSIGNEE

Box PATENT APPLICATION
Assistant Commissioner for Patents
Washington, DC 20231

Docket No: H01.2-8601

FCP Europa Carton Faltschachtel GmbH
(Name of Company)

, as assignee of

the entire interest of the above identified patent application, hereby appoints the following attorneys to insert the docket no., filing date and application number of said application above when known; to prosecute this application and any application claiming priority therefrom; to execute any terminal declarations on behalf of assignee, and to transact all business in the Patent and Trademark Office connected therewith:

Oliver F. Arrett	<u>Reg. No. 22,117</u>
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all of VIDAS, ARRETT & STEINKRAUS, Professional Association, Suite 2000, 6109 Blue Circle Drive, Minnetonka, Minnesota 55343, USA, Telephone (612) 563 3000, and I hereby authorize them to act and rely on instructions from, and to communicate directly with, the firm or person which sent this case to VIDAS, ARRETT & STEINKRAUS unless or until I instruct VIDAS, ARRETT & STEINKRAUS in writing to the contrary.

Dated this 31 day of January, 2000.

(Name of Company) FCP Europa Carton Faltschachtel GmbH

(Signature) By: [Signature]

(Title) Its: Hilger Scheelecke
R & D Manager

(Filing date, serial number and docket number may be left blank at time of signing)

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